

THERE IS CLAIMED:

1. An anti-PMD system comprising a pulley adapted to oscillate in rotation and to apply a torsion torque alternately in the clockwise direction and in the counterclockwise direction to an optical fiber during drawing of said optical fiber to reduce its PMD, in which system a portion of a peripheral external surface of said pulley intended to be in contact with said optical fiber during drawing is convex.
2. The anti-PMD system claimed in claim 1 wherein the ratio  $r/R$  is from  $1/2$  to 1, where  $R$  is the radius of the pulley and  $r$  is the radius of curvature of the convex portion of said peripheral external surface of said pulley.
3. The anti-PMD system claimed in claim 1 wherein  $R$  is greater than 50 mm and the ratio  $r/R$  is from  $1/4$  to  $1/2$ , where  $R$  is the radius of the pulley and  $r$  is the radius of curvature of the convex portion of said peripheral external surface of said pulley.
4. The anti-PMD system claimed in claim 1 wherein  $R$  is less than 50 mm and the ratio  $r/R$  is from 1 to 2, where  $R$  is the radius of the pulley and  $r$  is the radius of curvature of the convex portion of said peripheral external surface of said pulley.
5. The anti-PMD system claimed in claim 1 wherein the radius of curvature of the convex portion of said peripheral external surface of said pulley is constant over the whole of said convex portion of said peripheral external surface of said pulley.
6. The anti-PMD system claimed in claim 1 wherein all of said peripheral external surface of said pulley is convex.
7. The anti-PMD system claimed in claim 1 wherein the radius of said pulley is less than or equal to 100 mm.
8. The anti-PMD system claimed in claim 1 wherein the radius of said pulley is greater than or equal to 25 mm.
9. The anti-PMD system claimed in claim 1 wherein said pulley has no guide rims.
10. The anti-PMD system claimed in claim 9 wherein the oscillations of said pulley have an angular amplitude that is sufficiently low for said optical fiber not to jump off said pulley despite the absence of guide rims on said pulley.
11. A pulley intended for use in the anti-PMD system claimed in claim 1.